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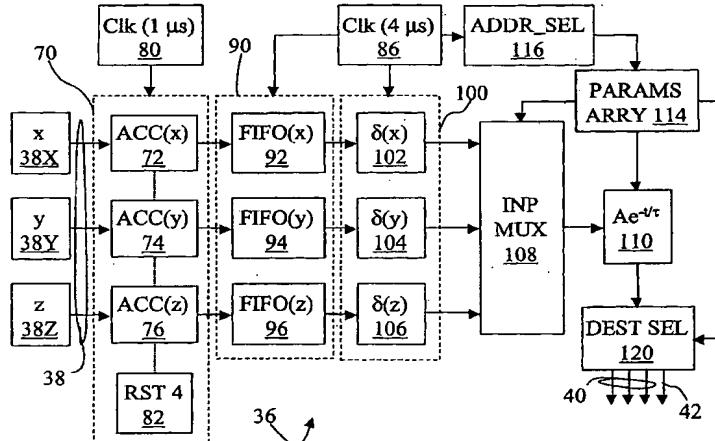
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(54) Title: DIGITAL MAGNETIC RESONANCE GRADIENT PRE-EMPHASIS



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(57) Abstract: A magnetic field gradient system includes a magnetic field gradient coil (20) and a magnetic field gradient amplifier (30) that operatively communicates with the magnetic field gradient coil (20). A pre-emphasis digital circuit (36) receives a digital magnetic field gradient control signal and outputs pre-emphasis correction terms. The preemphasis digital circuit includes a delay circuit (92) that delays the digital magnetic field gradient control signal by a selected time interval to produce a delayed digital magnetic field gradient control signal. A plurality of digital filters (110) each have selected time constant and amplitude parameters. The digital filters (110) receive the delayed digital magnetic field gradient control signal and output the pre-emphasis correction terms. A parameters memory (114) stores at least the time constant and amplitude parameters of the digital filters (110).